

FUNCTIONAL MATERIALS FOR USE IN OPTICAL SYSTEMS

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ABSTRACT

Functional optical materials for optical systems that are typically useful in optical waveguides, optical switching systems, optical modulators, optical
10 computing systems and the like. Included are polymer systems and electrooptical chromophores. Polymers are thermoplastic and/or thermosetting polymers and are blended or co-polymerized with the electrooptic chromophore. The thermoplastic or thermosetting polymer selected from an acrylic / methacrylic, polyester, polyurethane, polyimide,
15 polyamide, epoxy resin, or hybrid (organic-inorganic) or nanocomposite polyester polymer. The electrooptic chromophore is selected from a substituted aniline, substituted azobenzene, substituted stilbene, or substituted imine. Methods for improving adhesion promotion for the various novel materials are also provided.